REMARKS

In the pending Office Communication the Examiner has found the Applicant's arguments filed on November 11, 2008 to be unpersuasive. Accordingly, the Examiner renewed the rejection of Claims 19-31 and 36-38 under 35 U.S.C. § 103(a) as being unpatentable over Yoshinari in view of Park. In addition, the Examiner also renewed the rejection of Claims 32 through 35 under 35 U.S.C. § 103(a) as being unpatentable over Yoshinari in view of Park and further in view of Satek. Applicant respectfully traverses each of these rejections and requests that the Examiner reconsider.

CLAIMS 19-31 and 36-38

It appears that the Examiner has focused on the applicant's conclusions rather than addressing the factual basis that supports the applicant's arguments as set forth in the previous response. More specifically, the claims in the subject application, and the Park reference cited by the Examiner, relate to entirely different components and that perform entirely different functions. The present invention is for a high temperature gas turbine structural component made from a superalloy that is strengthened by a strength promoter selected from the group as set forth in the claims 19, 23 and 38. These components include a strength promoter in the concentration range of 50 ppm to about 2000 ppm, which is about 0.005% to about 0.2% by weight.

In contrast, Park discloses a composition for a catalyst that can be used with a turbine machine in order to reduce nitrogen oxide (NO_x) output in a combustion product. As set forth in Park, paragraph 2, engine manufacturers are being forced to reduce the amount of harmful compounds in the combustion exhaust. Park discloses a γ'-gamma aluminum oxide catalyst produced from a sol-gel process. This catalyst is then doped with a metal to enhance the performance of the catalyst, more specifically to enhance the capabilities of the catalyst to reduce the NO_x output in the combustion product. In paragraph 46, Park discloses a dopant such as indium or indium oxide. In paragraphs 47 and 48, respectively, there is disclosed tin oxide or gallium oxide dopant.

The Examiner has argued that Park teaches a "metal promoter" that is used in a gas turbine exhaust system. On page 2 of the Final Office Action, the Examiner suggested that the

Park reference discloses a "strength promoter"; however, Park does not disclose a strength promoter. Park refers to metal promoters. By definition, a promoter, in the sense that Park uses the term, is a substance that, when added to a catalyst, increases its activity. A catalyst is any substance of which a small proportion notably affects the rate of a chemical reaction. In the case of the Park reference, the catalyst is γ'-gamma aluminum oxide, which is used to affect the rate of NO_x reactions to reduce NO_x emissions. As described above, the "metal promoter" of Park enhances the performance of the catalyst. The Examiner argued that because the promoter in Park is used in a high temperature area, it would have been obvious use the promoter of Park with the Yoshinari invention in order to increase the strength and thermal resistance of the super-alloy. The Examiner makes this leap by assuming that the promoters in Park and in the subject application are performing the same function, when in fact they are not. It also assumes that Park teaches that the promoter increases strength, which he does not.

To that end, the concentrations claimed in the subject application are entirely different. Each of the independent claims 19, 23 and 38, refer to concentrations in an amount of 50 ppm to 2000 ppm, which is about 0.005% to about 0.2% by weight. In paragraphs 73 to 88 of the present application there is reference to successful test results for a tin or tin oxide strengthener in an amount of 1100 ppm (0.11% by weight).

The concentration of indium relative to the catalyst disclosed by Park is 1% to 10% by weight; the concentration of tin or tin oxide disclosed is 1% to 20% by weight (preferably 10%); and, the concentration of gallium or gallium oxide is preferably 25% to 50% by weight. These amounts of a promoter far exceed the concentrations of the subject claims. The Applicant submits that one reason for this difference in concentrations is that the strengthening promoter claimed invention is not a "promoter" in the context in which Park is using a promoter. That is, the claimed invention is not for a combination of a promoter and a catalyst that is used to affect the rate of a chemical reaction to reduce NO_x emissions.

As noted, the Park compositions are used in the process of forming a catalyst or in combination with catalyst. There is no suggestion or reference to using any of these compositions to produce a solid metallic component of a turbine machine such as a rotor blade or guide vein, for example. Indeed, applicant submits that one skilled in the art would not consider the Park reference as an analogous art in arriving at the claimed invention. Indeed, the Park

reference provides a composition that is intended for an entirely different purpose as the claimed invention, which would explain the difference in concentrations.

Applicant recognizes that it may be prima facie obviousness to combine two compositions, each of which is taught by the prior art to be useful **for the same purpose**, in order to form a third composition to be used for the very same purpose...the idea of combining them flows logically from their having been individually taught in the prior art. In re Kerkhoven, 66 F.2d 846, 850 (CCPA 1980); MPEP 2144.06. However, in the present case, the Yoshinari and Park patents disclose compositions related to entirely different purposes, i.e., Yoshinari provides a composition for a structural part of the turbine (a rotor blade) where strength is paramount, while Park discloses a composition for a catalyst to reduce NO_x combustion output where catalytic activity is paramount. Accordingly, one skilled in the art would not be motivated, nor is there any suggestion in these references, to combine components of the Park catalyst composition, namely the metallic dopant, to the nickel-based superalloy disclosed in Yoshinari to enhance the heat resistant characteristics of the rotor blade in a turbine machine.

CLAIMS 32-35

As noted above, the Examiner rejected Claims 32-35 based on the combination of Yoshinari, Park, and further in view of Satek. The Examiner relies on the Satek reference because Satek discloses the use of ruthenium. However, the Examiner fails to explain that similar to Park, the Satek reference discloses a catalyst product in order to reduce the NOx output in a combustion product. Accordingly, the applicant's arguments above as to Claims 19-31 and 36-38, and the combination of Yoshinari and Park apply equally to combining the Satek reference as a basis for rejecting any claims, namely Claims 32-35 in the subject application.

In view of the foregoing, the applicant respectfully requests the Examiner to withdraw the rejections and submits that the pending claims are in condition of allowance.

CONCLUSION

Reconsideration of the pending rejections and allowance of claims 19-38 are respectfully requested. The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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